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BUREAU OF
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 5 1928

REPORT FOR WEEK ENDING MAY 5, 1923.

AKRON:

April passed with a total rainfall of 1.65 inches as against a 13-year average of 2.45 inches. Where as a rule much run-off occurs during this month, April this year received its rains well distributed and the agricultural outlook is average or above.

Early spring sown grains are making nice progress. Winter wheat, too, is showing at some distance from the fields. On the station it appears that a 100% stand of winter wheat has been obtained on the two sheep rotation fields. Rotation plat stands are not nearly so good.

Apricot trees among the border plantings are in bloom. Some of the plum varieties are so nearly in bloom as to show white at some distance from the tree. Cherry trees appear to be within a week of blossoming time. Shade trees in Akron are breaking into leaf; same type of tree here on the station is just showing leaf activity.

Visitors were Professors Alvin Kezer and J. W. Robertson, of the Agronomy Staff of the State Agricultural College, and Mr. Waldo Kidder, Extension Agronomist for the State of Colorado.

Maximum temperature 78, minimum 32; precipitation .64 inch.

ARCHER:

Weather conditions have been threatening and cold most of the time, accompanied by high winds. However, work has progressed quite rapidly. Most of the fields are ready for seeding. This operation will begin in a couple of days at which time seed bed preparation will end. In the lower altitudes seeding is in full swing. Most of the farmers are carrying high hopes with regard to the production and marketing of this season's crop.

Range conditions are very good and cattle are out of serious danger of heavy spring losses.

The station made a casual test of distillate as fuel for the tractor. It gave slightly better satisfaction than kerosene and is considerably cheaper. Distillate is bought for 9¢ per gallon and kerosene for 14¢ per gallon. The economy in the use of distillate has been given a great deal of consideration by the distributors of the Fordson tractor and the dealers of the product.

Maximum temperature 67, minimum 29; precipitation .01 inch.

ARDMORE:

Two light showers during the week, on ground that was already wet, made field operations impossible. Seeding operations throughout the country have been much delayed. Many farmers have not yet seeded small grain. It is now too late to prepare land and seed with a reasonable expectation of securing a profitable crop. Conditions this spring emphasize the importance of leaving land in such condition in the fall that it can be quickly prepared for spring seeding.

Ardmore, continued:

Native pastures, especially western wheat grass, is making a rapid growth. Alfalfa has a good start. Dairy cows were turned into crested wheat grass pasture on the 3rd. The grass in this pasture is now about four inches high and making a rapid growth.

Maximum temperature 65, minimum 34, precipitation .49 inch.

BELLE FOURCHE:

The week has been very dry and windy. The heavy fall precipitation followed by the comparatively open winter combined to make the surface soil very mellow. The dry weather during the spring has dried out this surface layer and it is now in ideal condition for blowing. Until the past week the wind movement this spring had been unusually low and no soil blowing took place. On Monday a high wind arose, and soil blowing commenced on nearly all plats. No particular group of plats suffered worse than the others, the blowing being universal on every thing except the spring plowing. At that time no grain had emerged so the winter wheat was the only crop to be injured. Since that time all of the spring-sown grains have come up, and any severe blowing from now on might prove disastrous. A small amount of blowing has taken place on other days but so far it has been possible to check it through cultivation of roads and alleys.

The alfalfa, brome grass, flax, and sweet clover were planted during the week. The seeding of these crops was delayed in order to kill out as many weeds as possible before planting.

All spring plowing for corn has been completed. The soil plowed up in fairly good condition and worked down well enough to form a fair seed bed.

If whirlwinds are to be considered a sign of dry weather, this year holds forth promise of being exceptionally dry. It has not been uncommon to observe five or six of them on the dry land rotations at the same time.

Maximum temperature 79, minimum 34, precipitation .12 inch.
The total precipitation for the month of April was .82 inch, and for the year to date is 1.71 inches.

BIG SPRING:

With the exception of a bad sand storm one day this week, weather conditions have been very condusive to field work. All farmers in this vicinity are very busy planting cotton, and all seem very much elated over the prospects for a good crop this year.

This week it was necessary to scratch the first date of seeding in order to break the crust which had formed after the last rain. All of these plats are up to a good stand now. The second date of seeding was made on April 30, but none of the varieties have emerged as yet. One commercial field was disked and will be planted next week if all goes well. The A plats in the M.C. series were plowed today, and the fallow plats in the M.C. series and in the rotations were plowed on May 4. These plats were plowed a little earlier than usual because they were covered with such a dense weed growth.

Maximum temperature 87, minimum 49; precipitation 0.

COLBY:

Favorable weather conditions for growing crops have prevailed for the past two weeks. Two and one-half inches of moisture fell the last week in April, while to date one-half inch has fallen in May. The ground is moistened in pretty good shape in the surface two feet. The total precipitation of three inches fell on eleven days in varying amounts but with not sufficient moisture at any one time to cause any appreciable run-off. All spring grains are looking fine. They were all up to a good stand on the D.L.A. project before the rains, with the exception of 406-A and 407-A barley. These plats came up to a stand after the first rains and showed a stand by May 1. Winter wheat in this locality is going to be very spotted on plowed ground, while summer fallowed ground is going to be a total failure in most instances. All summer-fallowed plats on the project are going to be thin, while there will be a few which may not be able to keep ahead of the weeds. Our winter wheat varieties and method of seeding winter wheat plats (on fallow ground) will be a total failure according to present indications.

There has been too much precipitation for field work this week.

Dean F. D. Farrell, Director of the Kansas Station, was a station visitor on Monday.

Last killing frost to date was the 25th of April.

DALHART:

The past week has been rather stormy so far as winds are concerned. May 1 was one of the windiest days of the season. The wind blew so hard all day that no field work could be done. There was so much wind that it moved the 500 bushel steel grain bin about 18 inches but nothing was damaged. The bin was replaced with a block and tackle and tied to its place with a 2-inch rope. There was some soil blowing in places where a gust or whirl of wind would pick up sand for a few minutes but there was no steady sand movement on the station. The grape planting was cultivated as a safety measure as the grapes were just leafing out and would be easily killed by sand cutting off the young leaves.

The first date of planting could not be made until May 3. The plats were all prepared for planting April 30. When the planting was made on the 3rd it was done in a heavy wind and some rain. There was a light rain accompanying the wind during the entire time of planting. The rain did not amount to more than a trace. Eight varieties were included in the date planting. The remainder of the Cereal and Forage block was double disked during the week. Two days and a half were spent in hauling feed from Dalhart.

Everything in the Panhandle is looking good at this time. The pastures are green and are affording some grazing. Trees are making rapid progress toward leafing out. Some are nearly in full leaf while others are just beginning. Fruit has had an excellent showing and is just about safe, so far as frost is concerned. Since there has been no frost to kill the fruit, it is hoped that there will be no hail to kill it. Parties who are traveling a great deal report that this section of the Panhandle is in far better shape than any other section due to the good rains that have fallen here.

Dalhart, continued:

Maximum temperature 81, minimum 39, precipitation Trace. Precipitation for April 4.09 inches. Evaporation and wind velocity heavy. Lowest temperature for April was 30 on the night of the 4th.

DICKINSON:

With the exception of Monday afternoon the entire week was fit for work in the field. The weather in general was cool with one night below freezing. Grasses have now made enough growth so that some feed is available in pastures.

Wheat and oats planted April 21 on the Rotations are now emerging.

Eighty additional plats of Rotation and tillage work were started during the week. Sixty of these are on leased land and twenty on the station just west of the main Rotations, which were started in 1907.

About 200 plums and 65 apples and crabs were planted May 5 from stock received from the Northern Great Plains Field Station.

Seeding of wheat in the locality appears to be about two-thirds completed. Although the season is late the acreage will be about as large as during the past few years.

Maximum temperature 72, minimum 30, precipitation .22 inch. April precipitation was 1.78 or .57 inch above the 31-year normal for this station.

GARDEN CITY:

The ground has been so wet that little field work was attempted this week. The listing for fallow was started but rain prevented its completion. The plat that is to be planted to potatoes was prepared for planting this morning, but rain this afternoon prevented any work out of doors.

The spring wheats, oats, and barley on the dry land project have emerged to a good stand. Alfalfa on the general fields has made a rapid growth during the past ten days.

1.91 inches of rain was received this week making a total of 4.78 inches during the past two weeks.

HAVRE:

Precipitation during the week amounted to .51 inch, which fell as a slow rain on the 29th. This rain was of benefit in that it wet the ground to the old moisture, thus assuring fair germination. The drill has been going all week on the rotations and all the wheat, oats and barley are seeded.

Havre, continued:

Some of the blocks in Field B were also seeded. Drills were started on the commercial fields. The most of this seeding will be oats and about 100 acres will be seeded to domestic grass. Soil is generally working well and we have succeeded in killing most of the first crop of Russian Thistle before seeding. Winter wheat is showing poorer every day. From reports there is very little winter wheat in the county that has survived the winter.

HAYS:

Maximum temperature 83, minimum 36. Total precipitation, made up of several showers, .77 inch. The weather generally has been quiet, partly cloudy, and showery--an ideal condition for growing crops.

Oats, barley and spring wheat have during the week come up to a good stand. Field peas are coming through the ground slowly. Brome grass is up to a good stand, but the weeds are also coming so very thick, it looks doubtful if the brome grass can survive. Weeds are coming very thick everywhere.

The surface ground has been too wet for any field work until Friday when teams were started. The field work done consisted largely in weedering the winter wheat plats, (the idea being to thin out the weeds) and leveling of lister furrows which were made early in the season to prevent blowing.

Forest trees are now coming out in leaf and the pastures are getting green. Alfalfa is making good growth. The season is practically one month behind, due to the prolonged drought which now seems to be broken.

HUNTLEY:

All spring cultural operations were completed during the week and the seeding of all crops with the exception of corn will be finished in the rotation and pasture experiments today. Rainy weather early in the week held up field work for a day or two but by using three outfits of teams and machinery much of the delay was overcome.

Winter wheat continues to make good growth and farmers are more optimistic regarding crop prospects. Alfalfa has profited by the warmer weather and stands that appeared to be badly winter-killed are making a little growth.

The rains of the past week have brought the precipitation for April up to 1.43 inches which is .26 inch above the 13-year average for this station.

Maximum temperature 76, minimum 27; precipitation .58 inch.

JUDITH BASIN:

With the exception of the past two days, the weather during the week has been quite cool. No precipitation was received and the ground is drying out very rapidly. The surface soil is dry and dusty and is commencing to blow, a condition which has never before been known to occur during May in this locality. As yet no rain has been received this spring and the precipitation for the past month, which was distributed in five light snow storms, only totaled .16 inch.

Crop growth has progressed slowly and much of the winter wheat is still in a doubtful condition. Several plats on the winter wheat continuous cropping series will apparently have to be reseeded but a fair stand survived on the other winter wheat plats on the rotations. Other crops have made a slow growth and most of the trees are budding.

Field work has been devoted to seeding on the Forage Crop and Cereal projects, plowing and preparation of increase fields for cropping to spring grains, treating grain and planting garden. Seeding on the rotations has been delayed purposely in order to control wild oats and other noxious weeds.

Maximum temperature 74, minimum 26.

LAWTON:

Weather favorable to crop growth and the prosecution of field work obtained the past week.

Wheat has grown rapidly and two varieties of soft wheat are now pretty well headed. Kanred is just now showing a few heads out of the boot. Winter barley is also pretty fully headed. Arbruzzi rye will probably mature within 10 days. Oats and spring barley are making fair growth but both crops seem to have been stunted by the March freeze. The first cutting of alfalfa will be ready within a few days.

The second planting of grain and forage sorghums in the date of seeding tests was made on the 1st.

All cultivated land was harrowed during the week. All rotation row crops except cowpeas were planted this past week. Seeding of the grain and forage sorghum projects was completed on the 5th.

The seed bed in all instances was ideal and germination should be very satisfactory.

Planting in the cooperative cotton project will begin on the 7th and completed at an early date if the weather permits.

The infestation of chinch bugs in all small grain except oats is very heavy. The present infestation is composed of bugs that survived the winter and the next brood will undoubtedly be very large unless some unforeseen or abnormal factor develops within the next few weeks.

Lawton, continued:

The April precipitation totaled 3.48 inches or 0.53 inch above normal. Local rains in various parts of the county have produced a total in excess of that recorded at the station.

Maximum temperature 84, minimum 51; precipitation .04 inch.

NORTH PLATTE:

Fair growing conditions have prevailed during the week. Rain threatened several times but only .09 inch fell.

All plats have been prepared for corn, which will be planted during the coming week. Spring wheat reseeding on winter wheat plats are emerging. Winter rye is jointing.

SHERIDAN:

The entire week has been quite favorable for field work. The barley and field peas for green manure in the rotations were seeded the first of the week. The varieties of field peas, and the methods of seeding sweet clover and alfalfa also were seeded during the week. Nursery stock, consisting of trees and shrubbery for the building grounds and a few fruit trees, and the conifers received from Mandan, were planted today.

The varieties of small grains emerged during the week with a good stand. All vegetation, including weeds, is making a good growth.

Maximum temperature 75, minimum 27; precipitation .02 inch.

TUCUMCARI:

Conditions the past week have been favorable for field work and most of the south field was spring-tooth harrowed, increase land of the north field was spring toothed, the cotton block was plowed and disked, and plowing was begun on the variety block of the south field.

The May 1 date planting was made, nine varieties of grain and forage sorghums being planted. A variety test with alfalfa and sweet clover was seeded, five varieties being put in 44 inch and 22 inch rows.

Some time was spent in repairing the steel windmill and in repairing the water system.

No frost has been recorded in weeks and most fruit trees are fairly well laden with young fruit or blossoms. Only one killing frost later than May 6 has been recorded in eighteen years, so it seems possible that fruit will survive. With nearly two inches more rainfall during the first four months of the year than the mean average for this period, fields are in excellent condition and listing is progressing rapidly throughout this section. Winter wheat is now doing well, while spring grain, both wheat and barley, is excellent on the plains southwest of here.

Tucumcari, continued:

J. R. Horton, Entomologist of Wichita, Kansas, spent three days at the Station and over the county, investigating the cut-worm and corn borer infestations. Some wheat fields on the plains have been entirely ruined by the cut-worms and farmers are considering planting row crops. The corn borer problem is even more serious than that of the cut-worm. Several fields throughout the county were visited and the borer was found in practically all stubble in all fields visited. Notes will be taken this spring as to when the borers pupate and emerge as moths.

Maximum temperature 80, minimum 43, precipitation 0.0.
Evaporation 1.562 inches. Wind velocity 6.4 m.p.h.

WOODWARD:

On the night of April 30 we had a very severe storm, which, however, did no particular damage outside of moving considerable soil. We had two or three small showers during the week.

Winter rye is probably about one-third to one-half headed at present, and heads are beginning to show on the Kanred wheat.

During the week the roads on the D.L.A. project have been plowed and some of the fallows have been spring-toothed. Considerable work has been done in preparation for planting on the Dairy project.

The Cereal Office second date of planting has been put in. Peanuts are being planted today - (Saturday).

Several hundred Chinese elms grown from root cuttings have been transferred from the greenhouse to the nursery.

Maximum temereature 83, minimum 42, precipitation .35 inch.
Average wind velocity 6.9 m.p.h. Evaporation 1.435 inches.

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MAY 12 1923

REPORT FOR WEEK ENDING MAY 12, 1923.

AKRON:

The sheep rotation fallow field was plowed the fore part of the week and the ground immediately packed. Potatoes were planted the middle of the week. Other field work accomplished was the disking of all ground to be listed to corn, the spring-tooth harrowing of all rotation plats to be planted to corn, and the plowing of one 1½ acre strip for either fallow or Sudan grass for feed. Both orchards and the shrubbery plantings were cultivated.

Mr. Frederick J. Ritchey, in Charge of Corn Breeding Experiments, is here this week end in the interest of corn experiments. Mr. T. J. Killand, of the Mandan Station, also is here, his interest being the arranging of a landscape design for the station grounds and the planting of the foundation plantings as an initial start.

A few of the plums were in bloom at the time of the frost reported below but subsequent examination indicated no damage to the fruit. Very heavy northwest wind blew all day Friday.

Maximum temperature 79, minimum 30; precipitation, Trace.

ARCHER:

The first two and last two days of the week have been marked by precipitation thus delaying field work. Plowing is nearing an end and seeding is under way. Conditions are such as to make the latter operation very favorable.

The dairy stock were turned in the pasture today for the first time this season. The grass has made an excellent growth during the past week.

Maximum temperature 72, minimum 30; precipitation .81 inch.

ARDMORE:

Precipitation in the form of rain was recorded three days during the week, and there was very little rain or sunshine. No field work was possible with the exception of disking one-half of a day in preparation for corn planting. The ground is too wet even for breaking sod which is a very unusual condition this late in the spring. About 15 acres of sod is to be broken on the station this spring. Part of this sod land is to be seeded to brome and the remainder to be used in a field rotation devoted to the production of feed.

The station force was busy during the week hauling manure and building fences.

Hogs were turned into alfalfa pasture on the 10th. The alfalfa was about four inches high.

Small grain crops are making a very rapid growth. Winter wheat has started to grow with indications of a fair stand.

Maximum temperature 74, minimum 22; precipitation .31 inch.

BIG SPRING:

A rain of 1.05 inches fell on the night of May 6; it fell with such force that the ground was packed considerably and a large amount of run-off occurred. The wind started to blow before the fields were dried off and has been growing strong ever since. Most of the time during the past three days has been spent in harrowing and in cultivating in order to stop soil blowing.

There were little or no winds of any consequence during the months of March and April, when they are usually expected, but the first ten days of May have brought the average up to normal.

The plats on the Dry Land project were disked this week, and the planters will be started next week if conditions are favorable.

The prospects for a good fruit crop look very promising at present. It was thought that the late freezes of April had killed most of the peaches. Now several varieties of peaches as well as all of the cherries, plums and grapes, are well set with fruit.

Maximum temperature 90, minimum 45; precipitation 1.05 inches.

COLBY:

Weather conditions for crop growth have been both favorable and unfavorable for crop growth the past week. A rain the first of the week was encouraging and helped to keep the crust softened up for plant growth. Friday was a very hard day on the growing crops. A very strong wind from the Northwest raged during the afternoon, cutting the tips of the leaves on small grains. Spring seeded grains look very much better than winter wheat. The average height of the spring grains is greater than the height of winter wheat on fall plowed and summer tilled ground. On all fall-plowed land the stand is very thin except on the late fall plowing or those fields which plowed up rather cloddy; in fact, the rougher the land was last fall the better stand of wheat. Naturally the stubbled in wheat and the disked wheat is in very good condition. The average opinion is that the winter wheat is about 60 per cent of normal. The prevailing talk is that this will be the year that the lazy man with haphazard methods will be the better off. Weeds are coming fast in the thin wheat. A large percentage of the thin wheat is being listed to corn. More corn will be planted this year than last.

Corn varieties and corn on the D.L.A. project were planted on the 11th. We did not quite get through planting our field of commercial corn. Corn breeding will be put in the first of the week.

DALHART:

This week has been a little cool. There were a few warm days but these were followed by hard winds and cooler weather. There was a hail storm Friday evening. The hail was nearly an inch in diameter but the storm did not last long enough to do any damage.

Dalhart, continued:

Field work has been in progress all week. The land to be devoted to cotton work was double disked and will be listed at a later date. The general field for increase plantings was listed. This will be re-listed at a later date. The one field which includes the blue weed patch was plowed deep and drilled to sorgo and Sudan mixed. The sweet clover series was doubled disked with the exception of 13^2 feet on the south end which was left for a clover test. A seed crop will be planted on this strip.

None of the varieties planted on May 3d are up at this time. Unless the weather warms up a little more they will not get out before the second date. Preparation for planting the second date will be made Monday and planting will be made Tuesday if weather permits. Field work will be in full swing now until after all planting is finished. All the teams will be busy in the field for some time now.

Maximum temperature 89, minimum 41; precipitation Trace. There has been considerable wind during the week.

DICKINSON:

Cold weather has continued through the week with a hard freeze on the night of May 7, a minimum temperature of 21 degrees being recorded. The only damage observed as a result of this freeze was to flax seedlings in the April 21 seeding of the tillage experiment. About 80 per cent of the plants had emerged. Of the plants above the ground only about 5 per cent were killed although about all of those below the surface were frozen. Young Russian thistle seedlings, which were very thick in these plats, were uninjured.

Corn was seeded on the Rotations May 10, and silage corn and a block of Wisconsin Yellow Dent for seed increase on the 11th and 12th. A field was seeded on the 9th to Victory Oats and Hannchon Barley for seed increase.

Wheat seeding is about 90 per cent completed in the locality.

Maximum temperature 72, minimum 21; precipitation .24 inch.

GARDEN CITY:

Growing conditions have been favorable throughout the past week. Although the temperature has dropped rather low during the night most of the days have been quite warm. All spring grains are making a rapid growth.

Field operations for the week included the finishing of the listing for summer fallow, spring-tooth harrowing all plats that were fallowed last year, leveling the ridges on the listed plats, and soil moisture determinations on the M.C. Winter wheat series. Some plowing was done but a broken casting on the plow has prevented the completion of the spring plowing.

Much field work is being done in this part of the country. In the sandy soil south of the Arkansas River corn is being planted while on the north side of the river, in the heavier soils, the sorghum crops will be planted to take the place of the winter wheat which did not come up.

Maximum temperature 91, minimum 38; precipitation .05 inch.

HAVRE:

Growing conditions during the week have been favorable. Humidity has been generally low with two showers amounting to .12 inch. Wheat, oats and barley have all emerged during the week with good stands. Winter wheat prospects have improved very little and it now is certain that all plats seeded on stubble or on fall plowing will be reseeded, while it is probable that that on fallow and corn land will be left to make what it will although there is not over 40% stand.

About 1600 trees were received during the week from Mandan and were added to the Horticultural Plantation. These trees were all Wild Plum and Cherry seedlings, with a few of the most hardy cherry and apple stock. The shelterbelt that was started in 1917, and added to from time to time since then, shows very little winter killing, the most being with the spruce trees that were planted two years ago. The Jack Pine and Yellow Pine that started last year are growing nicely now.

Native grass has made good growth during the week. Most of the native trees are leafing and the Choke Cherries are now in bloom. Native grasses are making a good growth, Cristatum being about 10 inches tall. In places where it was extremely dry last year, and where the alfalfa was young and not well rooted, this crop shows some winter killing. Old alfalfa at this time is nearly a foot tall in the bottom fields.

HAYS:

The weather has been generally warm except for one cold day when there occurred a light frost following the .10 inch rain. Three days during the week heavy rain storms have been reported 10 to 15 miles south and east.

The work during the week has consisted largely of field work, plowing, harrowing and cultivating,-finishing seedbed preparation for corn, killing weeds on fallow and trimming small grain plats.

Alfalfa was sown May 8. Brome grass was reseeded on the same date. Corn was planted the 11th.

Soil moisture determinations were made on the M.C. Series of winter wheat plats, Tuesday, 7th.
Maximum temperature 86, minimum 33; precipitation .10 inch.

HUNTLEY:

Conditions were favorable for field work during the first half of the week with the result that the seeding of miscellaneous grain and pasture crops was completed and corn land was worked down preparatory to planting. Corn planting was begun on the 10th but was interrupted by rain on the 11th and the ground is still too wet to be worked. This shower totaled .83 inch and fell during a period of about 12 hours. Practically all of this moisture entered the soil as it fell.

Huntley, continued:

Winter wheat and rye as well as the perennial crops have benefited by the warmer weather of the past week and have made good growth. Spring-sown grains are up and all plats appear to have a good stand, though it is yet too early for close estimates to be made.

Maximum temperature 82, minimum 26; precipitation .83 inch.

JUDITH BASIN:

The continued dry weather, which has prevailed during the past month, was relieved on May 11 by a slow drizzling rain which totaled .26 inch. Cool windy weather has prevailed during a greater portion of the week and all plant growth has been very backward.

Winter wheat was benefited materially by the recent rain, but the winter wheat prospects, however, are not very bright. Two of the winter wheat plats on the continuous cropping series will apparently have to be reseeded and the stands on most of the other plats in the rotations are rather poor, varying from 40 to 75 per cent of perfect. Native pasture grasses, brome grass, alfalfa and clover have made very little growth. The trees are leafing out slowly and none of them are out in full leaf, as yet.

Field work has been devoted to disking and harrowing of all spring and fall plowing on the rotations; seeding field peas and all small spring grains on the rotations in both fields A and B; seeding increase fields of spring wheat and oats; and sorting potatoes. Approximately 250 feet of trenching for water pipes have been completed, and pouring of the concrete foundation for the new office building is nearly finished.

Maximum temperature 75, minimum 31; precipitation .26 inch.

MANDAN:

Agronomy.

Wheat, oats and barley, are all up to good stands and are growing rapidly. Wheat was slightly injured by the low temperature during the week. Winter rye is making an excellent growth. Winter wheat in the stubble plat shows about 60 per cent stand at present. It is behind the winter rye.

Field work was delayed during the week because of rain and snow. About two acres was broken in Field B, along a coulee; this will be put into alfalfa.

The plats in the delayed seeding date of wheat have been worked and the wheat was seeded today, about two weeks later than the other plats. Weeds on the plats were not as far advanced as usual at this time, but many were ready to come through the ground when the plats were worked.

Sunflowers in the silage test for the Office of Forage Crop Investigations, were seeded today.

Maximum temperature 77, minimum 23; precipitation .20 inch.

Mandan, continued.

Cooperative Grazing Experiment.

Fences around the pastures have been repaired and the holes dug for the posts around the brome-grass pasture. Brome grass is in good shape for pasture at the present time.

Native vegetation is making a good growth and should make good pasture by the time the cattle are turned into the pastures.

The cattle were delivered at the pasture this morning. There are 73 head in the bunch, of rather inferior steers.

Horticulture.

The planting of vegetables and seeds in the acre garden has been nearly completed. Sweet corn selections are also in, and the planting of fruit trees in the fields is finished.

Last year's buds have been gone over and cut back; there seems to be about a 50 per cent stand. Where some wood was left in the bud there is apparently a much better stand than where it was taken out.

Land has been prepared for the planting of potatoes. Cultivation in the field has been started.

Arboriculture.

Planting of young nursery stock and tree seed is being pushed as much as possible, so that advantage may be taken of the present exceptionally favorable condition of the soil.

NORTH PLATTE:

Weather for the week has been very variable. Several warm days brought out the usual spring visitation of buffalo gnats. Minimum temperature went to 25 degrees on the 9th. Many fruit blossoms were out at this time and considerable injury is likely.

Corn was planted on all D.L.A. plats and most of the station fields during the week.

SHERIDAN:

A light rain in the morning interfered with field work yesterday. The rest of the week has been quite favorable. The corn plats in the Rotations were manured early in the week, and plowing for this crop is nearly completed now. The flax ground was prepared for seeding and is being seeded today.

The wheat and oats in the Rotations emerged the first of the week, and the barley about the middle of the week. Alfalfa, brome, and sweet clover also emerged during the week.

Sheridan, continued:

A high wind the first of the week blew the soil some on the north side of the station but apparently did no damage to the crop there.
Maximum temperature 77, minimum 31, precipitation .27 inch.

TUCUMCARI:

Good stands have emerged on the May 1 date plats in some cases, while other plats do not yet show a perfect stand. A portion of the cotton plats were planted on the 10th, while all spring plowed plats in the center field were plowed and spring-tooth harrowed. Fall-plowed plats in this field were double disked. Plowing and spring-tooth harrowing of the south field was completed, while the north field, early listed, is now being go-deviled. If weather conditions are favorable, much of the planting will be done next week.

Days of very low wind velocity have been followed by short periods of very high wind, but no blowing has occurred on the Station. Fruit trees are well loaded with blossoms or young fruit and indications point toward a good crop of fruit of all kinds. A great range of temperature has occurred the past week, the hot days, with high wind movement, tending to dry the surface soil excessively.
Maximum temperature 92, minimum 46; precipitation .04 inch.
Evaporation 2.340 inches. Average wind velocity 5.5 miles per hour.

WOODWARD:

On twenty-six (26) days of the past thrity-one (31) days we have had some precipitation, varying from a trace to 1.3 inch per day, with a total of 2.96 inches. Consequently the weeds have been starting very nicely and considerable cultivation has been necessary to keep them under control.

The orchard and vineyard have been disked, corn on the D.L.A. plats has been cultivated, post tree plantings have been pruned, and considerable brush hauled out. Some feed has been threshed and the orchard has been sprayed. The rest of the Chinese elms grown from root cuttings in the greenhouse, have been transplanted to the nursery making a total of about 1400 of these which have been transplanted.

Mr. Lewis T. Leonard, of the Office of Soil Bacteria Investigations, Washington, D. C., is at the Station at present in connection with some work on inoculation of soy, and common beans.
Maximum temperature 91, minimum 42; precipitation .30 inch.
Evaporation 1.778 inch. Average wind velocity 6.5 miles per hour.

BELLE FOURCHE:

All grain crops are up and are doing well. Some of the plats were injured by soil blowing, but all of the spring sown plats have almost completely recovered. The winter grains seem to lack the vitality to recover quickly. The plat of winter wheat on summer fallow appears to be the only one injured beyond recovery. It is doubtful whether this plat will have even a 10 per cent stand.

Bellefourche, continued:

The corn on the rotation plats was planted on the 12th of May. There will, no doubt, be an uneven stand on spring plowed plats unless a rain comes soon. The fall plowed plats were moist enough to insure even germination.

The weather all during the week was threatening but the actual precipitation was limited to an all day rain on May 11 that totaled .09 inch.

Soil samples show that the first three feet of soil on all of the grain plats are well filled with moisture. Alfalfa, however, is beginning to show a little need of moisture. The water will be turned into the ditches today and many farmers plan to irrigate this week.

As a whole the week was cool. The temperature was below freezing three nights during the week.

Maximum temperature 79, minimum 21; precipitation .09 inch.
This is the lowest May temperature yet recorded at this station.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 19 1923

REPORT FOR WEEK ENDING MAY 19, 1923.

HAVRE:

The past week has been below normal in temperature, with a maximum of 66 and a minimum of 26, the latter being on the night of the 14th. There was also frost on the night of the 15th. Precipitation for the week amounted to .36 inch falling in three showers.

Corn was planted on the 17th and 18th. Other grains have germinated quite uniformly except a few plats on fall plowing. Nearly a hundred acres have been seeded on the station to oats with brome grass and slender wheat grass. Conditions during the last week have been very favorable for the germination of the grass and the land has been cleaned of weed growth before planting.

Reports are that grasshoppers have appeared in rather large numbers in some portions of the county, although they are scarce as yet on the station. Some farmers have stopped seeding because of large numbers. They are most numerous on disked or stubble land and on fall plowing, but are not thick on spring plowing or fallow.

JUDITH BASIN:

The week has been comparatively cool and was characterized by frequent, slow, drizzling rains of nearly a day's duration in some instances. The total amount of precipitation recorded was rather light considering the proportion of the time during which rain fell. The moisture and cool weather have been of material benefit to winter wheat and winter rye. Alfalfa, brome grass, sweet clover and other crops also have attained a more healthy and vigorous appearance and have commenced to make a rapid growth.

Field work has been interfered with considerably by the stormy weather but the work which has been done was devoted chiefly to seeding operations. Corn, alfalfa, brome grass, sweet clover and crested wheat grass were planted on the rotations and with the exception of one plat of potatoes, all seeding on the rotation fields has been completed. Sunflowers and corn on the rate and method of seeding and other miscellaneous experiments were also planted. Barley and corn are now the only crops which remain to be seeded on the increase fields. A large number of ash and poplar trees were replanted during the week.

Maximum temperature 64, minimum 27; precipitation .27 inch.

HUNTLEY:

The greater portion of the past week has been cool and cloudy with frequent light showers. Conditions have been very favorable for the emergence of grasses and other delicate seedlings which are coming through the ground.

Corn varieties, sunflowers, and soy bean pastures were planted during the week and the trimming of winter wheat plats was begun.

Huntley, continued:

Soil samples taken during the week show but little increase in the depth of moisture penetration resulting from the favorable precipitation of a week ago. Soil moisture conditions as indicated by the last samples are not as optimistic as generally supposed. The maximum depth, to which precipitation has penetrated in grain stubble land, is 15 inches. The plowed land previously cropped to small grain is about the same as stubble land. One year fallow is wet to a depth of two feet with probably a small amount of available moisture in the third foot. Corn land and green manured land are about the same and rank between grain land and fallow in moisture content.

In spite of the cool weather crops have made a satisfactory growth. Spring-sown small grains are all up and present good stands on all plats. Winter grains are beginning to stool and where the stands are thin weeds are making their appearance. The recent showers have started weed growth on all cultivated land and eradication tillage will soon be necessary.
Maximum temperature 73, minimum 28; precipitation .18 inch.

SHERIDAN:

The weather for the entire week has been quite variable. Rain has threatened nearly every day, but little moisture has fallen. It has been cool for the most part, but quite favorable for field work. All crops have been growing nicely. Winter wheat, however, still presents a poor appearance, and the stand over a large part of this crop is thin. The last seeding in the fall has failed to emerge at all.

Soy beans and cow peas and alfalfa varieties were seeded during the week. All of the grass and alfalfa seeded early has emerged with a good stand. Corn was seeded in the rotations yesterday. The varieties were seeded today.
Maximum temperature 67, minimum 27; precipitation .35 inch.

DICKINSON:

Cold weather has continued and plant growth has seemed very slow. No trees or shrubs are yet in full leaf and the first flowers have just opened on juneberry, caragana and Prunus tomentosa. None of the plums or crabs are in bloom. A temperature of 24 degrees on the night of the 15th apparently did not injure any of the fruit.

Alfalfa, corn, millet and potato varieties were seeded during the week. The alfalfa work in addition to the variety test consists of Grimm seeded on light soil with winter wheat, spring wheat, flax and field peas as nurse crops, and also a depth of seeding series on this sandy soil which has a tendency to blow.

Corn projects consist of a variety test, source of seed test with the Northwestern Dent variety, date of harvesting with an early medium, and late variety, nursery, and increase of a promising locally adapted yellow dent corn and a high-ear selection of Northwestern Dent.

Dickinson, continued:

Winter wheat seeded in standing corn came through with such a poor stand that the land was disked on the 19th and seeded to increase of a beardless durum wheat. Where winter wheat was drilled in stubble it is being left, although the stand is rather thin, spotted, and weedy, so that the yield will likely be less than spring wheat.

There has been an unusually good early growth of Russian thistle this spring, as a result of plenty of moisture. On the Rotations fallow, fall plowing and green manure plats have much more of this weed than other tillage methods. If the present type of season continues, the grains will probably smother most of these weeds.

Maximum temperature 71, minimum 24; precipitation .45 inch.
The rainfall to date in May has been only about one-third of normal for the month yet there is plenty of moisture for some time.

MANDAN:

Agronomy.

The past week has for the most part been cold. The soil has not warmed up enough to be in the best condition for corn planting.

All corn plats in the rotations have been prepared for planting, which will be done early next week. Plowing has also been done for the corn varieties.

Winter rye is making very rapid growth. Winter wheat in the stubble is much behind winter rye, but is making a fair growth.

Alfalfa and sweet clover are making very good growth. A good stand of sweet clover will be available to plow under in the rotations this year.

Maximum temperature 73, minimum 29; precipitation .43 inch.

Cooperative Grazing Experiment.

The growth of native vegetation has been slow during the week. While growth of the vegetation started in the spring at nearly the normal period, it is now below normal in amount of growth.

During the week twenty head of two-year old steers were obtained to replace some of the smaller ones which were delivered at the pasture a week ago. The starting of the grazing experiment will be delayed about five days on account of gathering up more steers.

Fencing of the brome grass pasture has been in progress.

The cattle were branded on the 18th; expect about fifteen head which will be delivered at the pasture early in the week.

BELLE FOURCHE:

The weather during the whole week was threatening but the actual amount of precipitation was small. Measurable quantities fell on only two days. On one of these days .27 inch precipitation, most of which was hail fell in about two minutes. The hailstones were small and the storm was of such short duration that very little damage was done.

The temperature continues low. On the night of the 15th a minimum of 26 degrees was recorded.

The plats to be summer fallowed were plowed the latter part of the week. The soil was unusually mellow.

Winter rye is in good condition and is stooling heavily. Winter wheat appears to be very weak and is developing slowly. Spring sown grains are in excellent condition on all methods of cultivation except spring plowing. Much of the grain on spring plowing is not up and will not come up until after a rain.

Maximum temperature 73, minimum 26; precipitation .39 inch.

ARDMORE:

Snow and rain prevented any field work except on the last two days of the week. Precipitation so far this spring has not been above normal, but the distribution has been particularly unfavorable for the prosecution of farming operations. Spring opened late with a surplus of soil moisture, and field work has been interrupted frequently by small rains. It has been possible to work in the fields only a small percentage of the time. Under such circumstances the station work is accomplished at a comparatively heavy expense.

Some corn was planted on the 19th and the rotation corn plats have been put in condition for planting the first part of next week.

Weather conditions are favorable for all small grain crops and they have been making a very rapid growth. Native and cultivated pastures are excellent. Arrangements have been completed for starting the beef cattle grazing experiment on the 22nd.

About six inches of snow fell on the 14th. It was mostly gone by late afternoon of the 15th. The temperature went down to 28 the night of the 15th. Some damage was done in the community by frosts, especially to gardens.

Maximum temperature 75; minimum 28; precipitation .97 inch.

ARCHER:

Weather conditions have been marked by extremes--high temperatures followed by low with intermittent wind storms which carried great clouds of dust. These were so severe that field work was discontinued during the storm.

Archer, continued:

On Tuesday and Wednesday a cold storm consisting of rain, sleet and snow prevailed. Farther east these conditions did not prevail while to the west for a considerable distance the severity of the storm increased. Today is fine and seeding is progressing rapidly.

All Dry-Land winter wheat plats have been reseeded to spring wheat. Winter wheat on the cereal plats was killed by soil blowing to such an extent that all but those plats seeded by the furrow drill and a few seeded by the common drill (for comparison) have been disked and will be seeded to millet. The furrow drill plats are in very good shape.

A new field cultivator has been secured from the International Harvester Company and works very satisfactorily.

Professor W. L. Quayle was a visitor at the station on May 18. Maximum temperature 76, minimum 25; precipitation .22 inch.

NORTH PLATTE:

Temperatures have remained low throughout the week. A heavy frost, with a 30 degree temperature, occurred on the night of the 15th. This is fifteen days after the average date of last killing frost. Four days have been cloudy and four rains have occurred. The heaviest of these was last night when 1.05 inches fell. This fell very rapidly and was accompanied with considerable hail on the table. The spring grain crops are badly plastered down, and some corn was washed out or washed under. One plat was about half replanted.

Corn, which has been planted twelve days, is beginning to sprout but shows no signs of emerging. Corn planting in the vicinity has been considerably delayed by unfavorable weather. The acreage is very large on account of winter killing of wheat. The planting is about half done.

COLBY:

One of the finest rains that we ever witnessed commenced falling Sunday evening, the 13th, and continued to fall as a gentle drizzle until sometime during the night of the 14th. This rain soaked up very good on all fields so that there was very little run-off. The weather immediately following was such that very little was lost by evaporation. There was a minimum amount of field work that we were able to do this week because of the moist condition of the soil. All of the alleys on the D.L.A. project were cultivated today. Roads on all the station were double disked Friday and the orchard was double disked today. Some of the plats were edged off today.

Winter wheat is not stooling very much yet. Most summer fallowed and fall plowed wheat is so thin that it will necessarily have to stool very much to make sufficient to pay for harvesting. Apparently winter wheat is not growing as it should. Barley, oats, and spring wheat are as tall or taller than winter wheat on all except winter wheat stubbled in. Corn has sprouted but not emerged.

Colby, continued:

A temperature of 31 the first of the week with a heavy frost did very little if any damage. Fruit apparently is not hurt, volunteer sorghums were nipped but not killed, while most vegetation shows no effect of the freeze at all.

HAYS:

Generally the weather has been mild to warm, and damp with sunshine about half the time--very favorable conditions for all vegetative growth.

The work during the week has consisted largely in general repair work and trimming of small grain plats when the ground was dry enough for outside work.

Maximum temperature 81, minimum 33; precipitation 1.17 inches.

GARDEN CITY:

A rain totaling 2.74 inches during Sunday night and Monday, prevented field work during the first half of the week. This rain came down so slowly that little run-off took place. The rain was followed by a drop in temperature. Tuesday night the thermometer registered a temperature of 32 degrees. Only the most tender plants such as lamb's quarter and beans were killed by the frost.

Nearly all of the spring plowing on the project has been completed. The first planting of sorghum was made in the date test today. Planting of corn and kafir will begin Monday or Tuesday. Spring wheat is looking good but unless it makes a more rapid growth than it has thus far weeds are likely to crowd it out.

Maximum temperature 84, minimum 32; precipitation 2.81 inches.

DALHART:

The past week has been quite cool as a whole. There has been only one warm day (Friday) and today looks as if it might be fair. The remainder of the week was cloudy and cold. Three days of the week have been rainy. The first occurred on the 14th and continued each day for three days. The total amount of precipitation for the week was 1.36 inches. This rain came in a steady downpour so that there was no run-off. The fields have been too wet to work until Friday.

The second date of planting should have been made on the 15th. The heavy rain occurring on the 14th put a stop to the planting being made on time. Friday the plats were put in shape for planting and the planting made today (Saturday). The first date is just emerging. It has been so cool that stand is likely to be poor. There is only a poor stand showing at the present writing. The plats were nearly all prepared for corn planting Friday, and the remaining few will be finished today. Corn will be planted Monday and will be followed with the kafirs in the variety test and rotations, and the late maturing sorgos.

Dalhart, continued:

The results of the last two years' dry weather has just begun to show up on the trees. Many elms have been partially killed--tops killed but some life remaining in trunk. These and the mulberry trees have suffered most. The block of elms in the forestry planting have died out until there is not a single tree left that is alive at the top. Nearly all of them are sprouting along the trunk. The ash in the similar planting have stood the rigid conditions in good shape. There is not a single ash tree that died or even killed out among the tops. Fruit is safe to date but may still be lost if a hail storm occurs. The cherry trees are full of fruit. Peaches, apples and pears have a few and plums are pretty heavily loaded.

Maximum temperature 84, minimum 37; precipitation 1.36 inches. Wind velocity has been moderate during the week, averaging about 9 m.p.h.

TUCUMCARI:

Plats in the center field were planted this week, although heavy rains early in the week prevented planting of the north and south fields. With favorable conditions for field work the coming week, most of the planting will be done within ten days. Previous to planting center field plats, they were listed, harrowed, or spring-toothed, as cultural practices demanded. The May 15 date plats were not planted until the 16th, due to the field being wet from the rain of 1.82 inches on the 14th. Some of the May 1 plats have not as yet made good stands, due largely to the cool weather early in the month.

The north field increase block was disked, while the plats were go-deviled and are now being spring-tooth harrowed. Increase strips in the center field were disked preparatory to planting.

Precipitation totaling 7.27 inches has been recorded this year to date and the soil in plowed or listed fields is well moistened to a depth of four to six feet. Farmers throughout this section are optimistic over the favorable conditions and are planting an unusually large acreage of all row crops. Wheat is looking much better, except where cut worms killed practically the entire stand. Spring grains look exceptionally well on the plains to the southeast.

Maximum temperature 89, minimum 41; precipitation 1.88 inches. Evaporation 1.664 inches. Wind velocity 6.0 m.p.h.

BIG SPRING:

Weather conditions this week have been rather unusual and disastrous for this section of the country. Early Monday morning a twister passed about four miles south of the station; it cleaned out all vegetation within its path, and also killed several horses and cattle. By the time it had reached the next county east, it had developed into a real tornado. There it killed about thirty people, injured a great many more and totally destroyed every building within its course for several miles. Directly following the twister,

Big Spring, continued:

the worst sand storm of the season occurred, and coming so late in the season it did more damage than usual. Many farmers had considerable stuff planted, so it was either killed or covered so deeply that practically everything will have to be replanted.

One increase block of sumac was planted this week and one field prepared for the cooperative experiments. With the exception of Milo all of the M.C. series were planted this week as were also the other cotton plats in the D.L.A. project. There is plenty of moisture in the soil, so a good seed bed was obtained; if it does not rain within the next few days to bake the surface, everything ought to come up to a good stand within a very short time.

Maximum temperature 100, minimum 49; precipitation .04 inch.

LAWTON:

From May 6 to 12 the temperature ranged from 33 to 98. Evidences of frost followed the minimum temperature of 33 on the night of the 8th. Since the 12th it has been too cold for satisfactory crop growth except small grain.

On the night of the 13th and the morning of the 14th 3.03 inches of rain fell in torrents. The last inch fell in about 30 minutes. Cool, mostly damp, cloudy weather followed for several days and field work was impossible until the 18th.

Drainage or overflow ditches in the roads on fields A and B filled with dirt washed from the plats. Row crops were washed out or buried and several deep ditches resulted with severe damage to several rotation plats.

Broomcorn, kafir, milo, and feterita were showing good stands before the rain but much of it must now be replanted. Only a fair stand of cotton obtained and probably half of it will be replanted. Germination in the co-operative cotton project had just begun when the rain fell, and the cold, wet soil has caused much of the seed to rot. Many of the young seedlings that have emerged are dying from sore-shin--a condition resulting from cold weather.

Oats have been in full head since about the 15th, while wheat was pretty well headed by the 10th.

Grading, disking, harrowing, and replanting started Friday morning but all field operations are delayed today, Saturday the 19th by 0.27 inch of rain which fell early this morning.

The total precipitation for the week is 3.30 inches.

Mr. J. R. Horton, of Wichita, Kansas, was here on the 7th, and Mr. E. H. Ostrum, of the University of Minnesota, has been here off and on for the past week studying rust spores on wheat.

WOODWARD:

During the past week we have had 2 inches of precipitation and since the 1st of May, on all but three days, we have had some precipitation varying from a trace to 0.96 inch, with a total of 2.56 inches.

Wheat and rye on the station are practically headed. Dewberries and blackberries have been making very rapid growth, in some cases new growth this spring amounting to from 2 to 3 feet, which is unusual for this early in the season.

Work during the week consisted of hauling manure, repairing implements, putting in sewer at the milk house, some pruning, finishing spraying, putting in third Date of Planting on Cereal Project, with considerable harrowing and spring toothing in preparation for planting row crops.

Two new horses were purchased to replace the tractor which is worn out.

Maximum temperature 85, minimum 39; precipitation 2.0 inches.
Evaporation 1.236 inches. Average wind velocity 7.0 m.p.h.

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BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 2 0 1923

REPORT FOR WEEK ENDING MAY 26, 1923.

HAVRE:

Weather conditions during the past week have not been favorable for small grains. There was only .05 inch of rain and the first few days were hot with a maximum temperature of 90. The last two days were very windy and cold. Friday evening there was one of the heaviest wind storms of the past three or four years.

Small grains on fall plowing show a very uniform stand at this time and the thistles are getting a start. That on spring plowing is not weedy but is making very little growth. That on corn land and fallow, expecially the wheat, is growing and is looking much better than the fall plowing.

Corn planted a week ago is coming through the ground with the appearances now of a fair stand.

The western part of this county and Liberty County to the west have a very severe infestation of grasshoppers. During the warm days the first part of the week they hatched in great numbers on land that was disked in. On some farms they have eaten practically all the spring grain. They are not doing so much work on the spring plowing and fallow except along the edges. But with so much abandoned land where they hatch it is rather difficult to control even on fallow with poison bait. From all reports this is the worst outbreak of grasshoppers in the state to date.

HUNTLEY:

Warm, humid weather has prevailed during the greater part of the week and crops have responded very noticeably to the favorable growing conditions. Corn is beginning to come up while beans and similar late-sown crops are well germinated.

The trimming of winter wheat plats, soil sampling and fencing the hog pastures have occupied the largest part of the week. Hogs will probably be turned on to the pastures on the 28th. This is somewhat later than usual, the delay being caused by the slow growth of forage and the necessity for confining hogs until they could be immunized against cholera.
Maximum temperature 37, minimum 41; precipitation . 26 inch.

SHERIDAN:

The first part of the week was cool and cloudy, and showers were frequent, but little rain fell near the station. Good rain occurred near-by, however.

The potatoes were planted in Rotation 37 on the 21st. Light showers prevented planting the varieties until the 23rd. A portion of the land broken up this spring has been prepared and seeded to corn for feed and increase seed. The remainder of this land is being prepared for sorgo and Sudan grass. All of the alleys between the plats have been cultivated and the roadways have been staked for lining.

Sheridan, continued:

The alfalfa varieties emerged during the week. All of the alfalfa and grass seeded has now emerged with a fair stand. Winter rye is in the boot. Winter wheat is stooling well, but there will be a poor stand with much of it anyhow. Spring grains have made a fair growth. The last two days, however, have been unseasonably warm and seem to have effected all vegetation some.

Maximum temperature 90, minimum 46; precipitation .31 inch.

DICKINSON:

The first three days of the week were cold, cloudy and windy and the last three hot and windy. The high temperature caused rapid growth of all crops. Corn planted May 10 is coming up. Apples and plums are in full bloom with an unusually large amount on the crabs.

Some time has been spent in removing dead trees from the shelterbelt. Where cottonwood alternated with ash in the planting about 1910 nearly all of the cottonwood are dead. All evergreen came through the winter in good shape.

Mr. J. G. Diamond, Agricultural Statistician, Bureau of Agricultural Economics, was a visitor May 25.

Maximum temperature 88, minimum 41; precipitation 0.

MANDAN:

Agronomy.

The past week has been favorable for all field work. Temperatures have been normal or above. The wind movement has been above normal for four days of the week.

Corn in the rotations was planted on the 21st and the varieties were planted on the 22nd. About fourteen acres of corn was planted for feed.

Plats have been lined up for trimming.

Alfalfa, sweet clover and the grasses continue to make good growth.

Maximum temperature 82, minimum 40; precipitation, None.

Cooperative Grazing Experiment

Native vegetation made normal advancement during the week.

Fencing and fence repairing continued during the week and things are in readiness to turn the cattle into the various pastures at once. The initial weights of the cattle were obtained during the latter part of the week. The average weight per head for the different pastures will be about 715 pounds.

Mandan, continued:

Mr. Lewis T. Leonard, of the Office of Soil Bacteriology Investigations, was here during the week and seeded Soy beans and garden beans for an inoculation experiment.

Dean Shepperd, of the Agricultural College, Fargo, North Dakota, Mr. Loftus, in Charge of State Hail Insurance, and Mr. Dickinson, Superintendent of the Indian School (Bismarck), were among the visitors of the week.

Horticulture.

Fruit trees and bushes are now in bloom, and notes are being taken on the blooming dates of different varieties. Plums, crab-apples, and small fruits, are again showing a heavy bloom this year, while apples, sour cherries, and a few pears are generally showing a light to medium bloom. Whitewashed trees are blooming considerably later than the same varieties not whitewashed.

More outdoor crossing is being done than in previous years. However, the continual windy weather of the past week has made this work rather difficult.

Potatoes have been planted, the usual variety test, spacing experiment, and selection work, being carried on. Several selections from the Minnesota Agricultural College are being tested.

The succession plantings of sweet corn, peas, and beans, were made in the acre garden, as were also plantings of root crops for winter storage.

A test of tomato strains from the breeding plats is being started this year, plants being sent to Field Stations in six states.

Shrubbery groups on the grounds have been spaded and hoed. There is considerable winter injury apparent this year--the Opulaster and Spirea Van Houttee suffering most, while Persian lilac and Yellow flowering currant, came through without any sign of winter injury.

All field blocks have now received their first cultivation, and hoeing weeds in the field has started.

Arboriculture.

All plantings have been completed and most of the seed is germinating in good shape. The Station shelterbelts and Specie blocks have been cleaned out and cultivated.

ARDMORE:

Precipitation was recorded four days during the week. The total amount of the rainfall was not heavy but was sufficient to prevent any field work except on the 25th and 26th. Planting of corn, sorghum and millet varieties was completed on the above dates. Taken as a whole, the spring has been one of the most difficult in the history of the station to get all crops seeded. The station planting and seeding is completed with the exception of 80 acres that are to be seeded to sorgo and millet.

Ardmore, continued:

Farmers generally are very much behind with their farming operations. The acreage seeded to wheat is much less than for a number of years. There also will be a decrease in the amount of land planted to corn. Native beef cattle are very scarce and none are being shipped into the country. The number of hogs has greatly increased, and the prospects are that there will be a shortage of feed for this class of live stock in the fall.

Beef cattle were secured during the week for starting the grazing experiment. The experiment will be started about 10 days late this year because of inability to obtain the steers at an earlier date. The cattle have been branded with individual numbers, vaccinated for black leg and dehorned.

Mr. A. C. Cooley visited the station on the 26th.

Maximum temperature 78, minimum 39; precipitation .50 inch.

ARCHER:

The precipitation for the entire week was .83 inch. The greater part, .73 inch, came during the afternoon of the twenty-first. The humid condition of the atmosphere prevented rapid evaporation, which caused a delay of two days in field work.

All seedings of Dry-Land plats have been finished except the millet and potatoes on the new series of rotation. All small grains have been seeded, only corn and millet remain to be seeded in the general field, and millets and potatoes in the varietal experiments.

A large number of varieties of corn and potatoes have been received from various parts of the state. The object is to find the best varieties and strains of these crops. Dr. MacMillan will visit the station each month during the growing season to look after the pathological features of the potatoes.

The seedings of crested wheat-grass and sweet clover are emerging with prospects of securing good stands. On the forage plat this grass is jointing, a stage which is considerably in advance of brome or slender wheat-grass.

The Northwestern poplar leafed out the fore part of the week and the box elder is in process. The ash are in the process of bursting the earliest buds as are also the Russian olive.

There is, in this section, considerable seeding of wheat in progress and the seeding of corn is at the high point. The seeding of millet has not yet begun. Farther east millet is being seeded. The cool wet weather during the last half of April and up to the present week has greatly delayed field operations.

Maximum temperature 73, minimum 41; precipitation .83 inch.

NORTH PLATTE:

The long standing drought has been broken. For the first time in about 13 months there is an excess instead of a deficiency in precipitation. 4.11 inches of rain has fallen since the 18th, making a total for the month to date 4.70 inches. This rain more than makes up for the accrued deficit since January 1st. All this rain fell slowly and was nearly all absorbed in the soil. The recent samplings indicate that the average penetration of soil moisture is now close to three feet.

Only one and one-half days of field work has been possible this week. The top soil is quite badly beaten down and a great deal of cultivation will be necessary. It is probable that some corn will need to be replanted.

COLBY:

Weather conditions remained unfavorable for field work. The soil has been too wet for field work the past two weeks. The last field work done was on the 12th. There has been rain enough the first of the past two weeks to keep the ground saturated for the remainder of the week. Work this week consisted in doing general repairing of farm equipment and buildings, rebuilding pasture fence, throwing in lister furrows made to stop spring soil blowing and working bindweed areas (Saturday), and also trimming some cereal variety plats although it was plenty wet for this work.

Winter wheat has not stooled very much. It has increased in height very much this week. Usually heads begin to show in the wheat at this time. Wheat varies from 8 inches to 14 inches in height, some has a dark green color while other fields are yellowish green. Fallow and fall plowed wheat is going to be thin. Spring grains look fine, although they too are behind their usual stage at this time. Corn, planted the 11th, is just showing a stand at this time. Apparently there is going to be ample corn in that already planted. Corn planting is about half completed in the county.

Precipitation for May to date is 4.57 inches (with very little run-off), for the year to date is 8.48 inches. For the 30 days from April 26 to May 26 we have had 6.54 inches.

HAYS:

Maximum temperature, 83, minimum 46, precipitation, total of rainfall recorded on four days, 1.40 inches.

Generally the weather has been warm and rainy, with two full days of sunshine the last of the week.

The ground has been too wet to work in the fields except for the last two days. The weeds are in the act of taking everything.

Hays, continued:

Corn is up to a good stand. Alfalfa and second seeding of brome grass is also up to a good stand. Winter wheat though a month late and very thin is making good growth. A few heads are about to emerge. Barley, oats and spring wheat are making from fair to good growth, but all are very weedy. The planting of kafir is going to be late; thus far it has been impossible to plant on account of the frequent rains. Alfalfa on the upland is about 12 inches high. It is higher and much heavier on the lowland. The rye crop for green manure is the most nearly complete failure recorded for at least 14 years.

GARDEN CITY:

A rain totaling 1.7 inches, received the first part of the week, prevented field work. That rain made a total of 9.34 inches of precipitation received between the dates of April 26 and May 23. The total precipitation for the year is 10.04 inches, or 4.06 inches above the 14-year average for the months of January, February, March, April, and May. A large amount of run-off has taken place on most of the plats. In taking soil samples on the M.C. Winter Wheat Series this week it was noted that dry soil was found in the second foot. On most of the plats the water had penetrated to a depth of about twenty-two inches.

Low temperatures during the past week have not been conducive to plant growth; however, alfalfa and spring wheat are growing rapidly. The potatoes in Rotation 37 have emerged to a good stand.

Maximum temperature 82, minimum 50; precipitation 1.7 inches.

DALHART:

The past week has been warmer than the weeks previous. There was some precipitation on the first of the week amounting to .40 inch. Again Wednesday evening a small shower came up about 5 p.m. and rained hard for a few minutes but netted only .01 inch. These rains were warmer than any rains received this spring. It has been warm enough all week that no fires were needed in the buildings to make them comfortable. The wind has been about normal. Some hail fell in the rain which netted .40 inch but no damage was done.

Field operations have progressed considerably this week. The entire cereal and forage block is ready to plant. The rotations for kafir, cowpeas and corn were prepared and planted this week. In addition to this the following varieties were planted: Standard, Marum, Sunrise, Red and Pink kafirs, Shallu and Spur feterita. The remaining sorgos will be planted at the time the June 1 date is planted. Cotton will likely be planted early next week.

At the last report it was stated that a poor stand was obtained on the first date of planting. At this writing there are good stands on everything except the dwarf feterita and it has a fair stand. The oat crop is making very poor progress.

Maximum temperature 86, minimum 46; precipitation .41 inch.

TUCUMCARI:

With seven head of horses in the field most of the week, preparation for planting and planting have gone forward rapidly. About seventy acres have been harrowed, spring toothed, or disked and most of it planted. Cowpeas and Sudan in alternate rows, south field, were planted, while about 15 acres of increase Sumac were drilled in and 11 acres Sumac increase were planted in rows. From two to four acres each of Pink kafir, Sunrise kafir, Dwarf kafir, Dwarf feterita, and Dwarf milo were planted for seed selection blocks, some of these varieties being listed in, as the soil was too dry for surface planting. Methods of Listing with dwarf milo, spacing test plats with milo and kafir, and variety and spacing plats, broomcorn, were planted.

Although a heavy rain fell on the 14th, high winds three days dried the soil in the north field to such an extent that planting of rotations and cotton seemed inadvisable and the same was true of plats to be planted to variety tests, grain and forage sorghums. Therefore, most of the week was spent in planting increase crops. Most rotation plats, center field, planted the 18th and 19th, have emerged to good stands and the same is true of the May 15 date plats. Although there is a good supply of moisture in the soil the surface has dried so rapidly that many farmers have discontinued planting.

The Delco engine was set up, the vineyard and tree rows hoed and spring-tooth harrowed, and the lawns mowed during the week.
Maximum temperature 90, minimum 52; precipitation 0.
Evaporation 2.402 inches. Wind velocity 5.6 miles per hour.

BIG SPRING:

The weather this week has been ideal for field work, and as a result everybody has been putting in overtime at planting. A large per cent of the cotton of this vicinity was planted during the last few days of last week and all of this week.

With the exception of the later dates of planting, the planting of all plats was completed this week. The milo which was planted on May 21, was up to a good stand on May 26. The other crops are coming through the ground fast but cannot be considered up to a good stand as yet.

The winter wheat plats are showing up very poorly at present. Good stands were obtained on all the plats last fall, but most of them winter-killed considerably. The wheat is just starting to head out now, and from present indications a very poor crop will be obtained.
Maximum temperature 95, minimum 53; precipitation 0.

LAWTON:

Weather unfavorable to the growth of all crops except wheat and oats prevailed most of another week. A torrential rain of 1.35 inches fell in about thirty minutes on the night of the 21st. Two light showers followed on the 22nd and 23rd, delaying field work until the 25th. Several rotation plats have been washed out again. They are now damaged to the extent that two of them, at least, cannot be repaired in such manner as will not interfere with the crop work this season.

Lawton, continued:

A strong wind started about 11:30 a.m. on the 21st, causing the loose, fine sand remaining on the surface of the soil, which had been slicked down by hard rains at previous dates, to blow. Cotton and sorghum crops were seriously injured within a hour. The young plants had the appearance of being hit by fire. The sorghums, however, although checked in growth appear to be recovering. Blowing was stopped at the earliest possible date but the ground was again packed and slicked down by 1.35 inches of rain which fell that night. Field work Friday and Saturday has made it possible to prevent blowing unless untimely rains interfere. Destructive storms have passed around this immediate vicinity during the week, but considerable damage has been done in various localities within the county.

Cotton on all rotation plats will be replanted within the next two or three days if possible. Replanting some of it for the third time in the grain sorghums in Field A, will also be done as soon as possible.

Alfalfa which is in full bloom is being harvested as rapidly as the weather will permit.

Winter barley in Rotation 196 is dying from what appears to be root rot. Present indications are that the yield on this plat will be very low. This condition has now been apparent about 10 days. Spring barley on Rotation 198 has never made satisfactory growth since the March freeze. With a few straggling heads and a thin stand it presents a very unfavorable appearance. There are, however, a few fields of very good winter barley within the county.

Dr. Tool, of the Seed Laboratory, Washington, D. C., visited the station on the 21st.

WOODWARD:

On Monday, the 21st, we had a very severe wind and rain storm, with a total precipitation of 2.87 inches, of which over 2 inches fell within about one and one-half hours. This naturally caused considerable run-off and it is going to occasion a good deal of replanting generally over the section. There seems to be a shortage of good seed with which to do this replanting. This rainfall interfered with our regular routine and about all that has been done during the week were odd jobs, such as repairing harnesses and machinery, hauling brush, etc. Corn on the D.L.A. project has been thinned during the latter part of the week; fallow plats have been plowed.

Maximum temperature 85, minimum 52; precipitation 2.89 inches.
Evaporation 1.18 inches. Average wind velocity 6.1 miles per hour.